



Best Practices for Spray Painting Operations

In recent years, there has been an emergence of an increasing number of *Automobile Spray Painting Shops*. No doubt, this is associated with the increasing number of vehicles being imported into the country which provide steady business for these Shops. Also, locally, the auto sales business is highly competitive, creating the need for vehicles to be regularly sprayed to enhance their visual appeal to customers.

Though business is a good thing, it is a fact that spray painting poses health and environmental risks if best practices are not followed. An observed trend is that many *Spray Painting Shops* begin as small operations in residential areas but soon expand to a larger scale thereby magnifying the risks to nearby residents and shop operators alike. These risks are associated with volatile organic compounds (VOCs) which are released during the spray-painting operation.

Cognizant of the risks associated with *Spray Painting Shops*, the Environmental Protection Agency developed Environmental Guidelines for these operations to safeguard the health and safety of workers as well as persons who reside in close proximity to such operations. Over the coming weeks we will be focusing on the Spray Painting Guidelines beginning this week with **best practices**.

Location

- Spray painting shops, should be located in a **commercial or industrial area and not a residential area** and at least 50 metres (164 feet) away from the nearest residence.
- Shops should not be in close proximity to dust producing facilities as dust will greatly affect the coating quality.



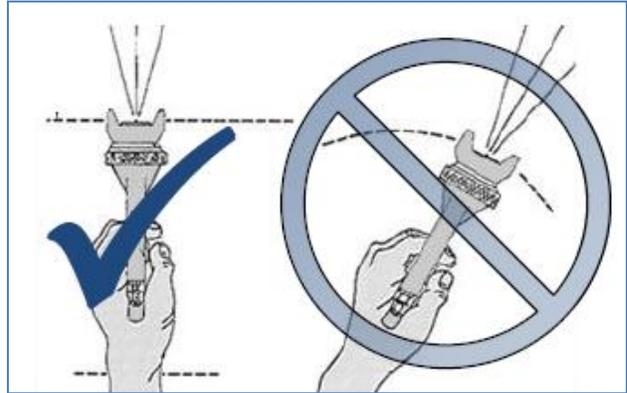
Setting Up

- Spraying must be done in booths or rooms that are constructed with non-flammable materials, such as steel, concrete and brick.
- Booth walls must be smooth and without edges to avoid the trapping of residue.
- Booth floors and fire doors must be non-flammable since chemicals used in spray painting can explode in the event of a fire.
- Booths should be adequately ventilated to keep vapors and paint away from other work areas or have an exhaust vent to remove them.

- Booth exhaust vents should be at least 2 metres above the highest roof in the surrounding area and equipped with an effective filter or water wash system to reduce emissions.

Handling Equipment

- Workers should be trained in the proper use of spray-painting materials.
- The spray-gun should be held at a right angle to the surface being sprayed.
- The distance between the spray gun's tip and painting surface should be maintained based on the equipment specifications. *(This will give the proper coat thickness, and minimize the use of more coats and so help to reduce VOCs emissions).*
- Choose spray equipment that will cause the most paint to be applied to the surface when sprayed, e.g., HVLP – High Volume Low Pressure paint gun.
- Determine the type of coating that will be sprayed through the equipment and use the paint gun that works best for the application of such coating. *Follow the manufacturer suggestions regarding air pressure and tip sizes for the specific product and equipment being used.*



Preparing for Spraying and Topcoats

- Wash dirt/grime from the vehicle using water or a soap and water mixture.
- Water based cleaners can be used to remove sanding, sludge, fingerprints, waxes and other contaminants.
- Use solvent based cleaners sparingly; mostly to remove grease, road tar, silicone, and driveline oils.
- Choose products that lessen the need for additional surface coating.
- Choose prep coats, primers and sealers in colors that can be easily covered with the topcoat.
- Apply only the number of coats needed to achieve a quality finish.
- Avoid the use of lacquer-based topcoats.
- Keep the use of paint additives to a minimum.
- When available, use water based coats.
- Use low VOC primer-surfacers, primer-sealers such as Chrome-Free Etch Primer, Epoxy Primer-Sealers, and top coats products such as low VOC Lacquer Topcoats.
- Avoid zinc-phosphate primers with high volatile organic compounds (VOC) content.
- As much as possible, perform body work using a minimal amount of primer-surfacer.

Next week we will examine other aspects of the Spray Painting Guidelines.

Share your ideas and questions by sending letters to: "Our Earth, Our Environment", C/O EIT Division, Environmental Protection Agency, Ganges Street, Sophia, GEORGETOWN, or email us at: eit.epaguyana@gmail.com